

City Scottsdale
Proposed 2021 International Energy Conservation Code (IECC)
Amendment Highlights

A. Cool Roofs	
Single Family, Multifamily and Commercial	Expected Outcome
<p>Cool Roofs. Low-sloped (less than 2 in 12) <u>roof surfaces over conditioned and unconditioned spaces</u> shall be provided with a 1) minimum solar reflectance index of 64 or 2) minimum solar reflectance of 0.55 with a thermal emittance of 0.75.</p>	<p>A cool roof uses solar reflectance and thermal emittance to help mitigate urban heat island sinks. Solar reflectance deflects sunlight and heat away from a building thereby reducing roof temperatures. Thermal emittance is the ability of a surface material to emit heat. Coupled together, these properties help roofs to absorb less heat and stay up to 50 - 60°F cooler than conventional materials during peak summer weather (EPA).</p>
B. Electric Vehicle Charging Infrastructure	
Single Family Dwellings	Expected Outcomes
<p>EV capable charging spaces. The main electrical service panel shall have a reserved space to allow for the installation of a full size 2-pole circuit breaker and shall be labeled “Future EV Charging”.</p>	<p>Given that transportation accounts for nearly 30% of greenhouse gas emissions, providing EV charging infrastructure for new home, multifamily and hotel construction will help accelerate the move towards net zero emissions.</p>
Multifamily and Hotels	
<p>EV capable charging spaces. EV capable charging infrastructure shall be provided for at least 20% of total parking spaces. In addition, 4% of total parking spaces shall be provided with EV supply equipment (EVSE).</p>	<p>By 2030, US EV sales are expected to reach 30% of all new car sales.</p> <p>It is estimated that the installation of EV charging infrastructure can be 3 to 4 times less expensive when installed during construction as opposed to retrofitting after the building is built.</p>
C. Additional Efficiency Package Options	
Single Family Dwellings	Expected Outcomes
<p>The energy code requires additional energy efficiency measures above the minimum thermal envelope requirements for enhanced energy performance. This <u>amendment</u> adds a sixth option for on-site renewable energy:</p> <p><u>Option 1</u> - Enhanced thermal envelope</p> <p><u>Option 2</u> - More efficient HVAC equipment</p> <p><u>Option 3</u> - More efficient water-heating equipment</p> <p><u>Option 4</u> - More efficient duct distribution system</p> <p><u>Option 5</u> – More efficient ventilation system</p> <p><u>Option 6</u> - On-site renewable energy</p>	<p>Providing an on-site renewable energy system will comply with the additional efficiency requirements of the code when the system meets one of the following:</p> <ol style="list-style-type: none"> 1. Provide a total rated capacity of not less than 2 watts per square foot of <i>conditioned floor area</i>. 2. Provide not less 50 percent of the estimated annual energy use within the building for mechanical, service water-heating, lighting and electric vehicle charging.